



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/070,123	03/29/2002	Masataka Kadowaki	AK-379XX	9685

207 7590 04/08/2005

WEINGARTEN, SCHURGIN, GAGNEBIN & LEOVICI LLP  
TEN POST OFFICE SQUARE  
BOSTON, MA 02109

EXAMINER

PATEL, VINIT H

ART UNIT	PAPER NUMBER
----------	--------------

1764

DATE MAILED: 04/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/070,123	<b>Applicant(s)</b> KADOWAKI ET AL.	
	<b>Examiner</b> Vinit H. Patel	<b>Art Unit</b> 1764	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 March 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>1 Mar 2002</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Priority***

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Japan on July 4, 2000. It is noted, however, that applicant has not filed a certified copy of the JP2000-202305 application as required by 35 U.S.C. 119(b).

### ***Specification***

2. The abstract of the disclosure is objected to because it exceeds 50-150 words and contains legal phraseology (i.e. reference to claim 1). Correction is required. See MPEP § 608.01(b).

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 1 is/are rejected under 35 U.S.C. 102(b) as being anticipated by Sugitani et al., U.S. Patent No. 5,316,721.

Regarding claim 1, Sugitani discloses alloys for reformers or reforming tubes (part of the reformer) (C1/L10-15) comprising 24.87% Cr, 34.99% Ni, and 2.40% Si (Table 1, No. 2) and the balance Fe and inevitable impurities (C2/L46-52). See Titanium Metals Corp. v. Banner, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985) & MPEP 2131.03.

***Claim Rejections - 35 USC § 102 & 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 2 is/are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Sugitani et al., U.S. Patent No. 5,316,721.

Regarding claim 2, Sugitani discloses heat alloys for reformers or reforming tubes (part of the reformer) (C1/L10-15) comprising 20-30% Cr, 25-40% Ni, and 2-3% Si and 0.2-2.0% Nb (C3/L1 – C5/L32) and the balance Fe and inevitable impurities (C2/L46-52). Sugitani discloses a range which touches, overlaps or is within the claimed range, but no specific examples falling within the claimed range are disclosed. However, Table I of Sugitani discloses examples (7, 8 and 9) within tenths or hundredths of a weight percentage point that would anticipate claim 2. Because the reference discloses the reasons to choose the specific percentage range of the alloy constituents and the near closeness of the disclosed examples to the claimed range (C3/L1 – C5/L32), sufficient specificity is met. See Ex parte Lee, 31 USPQ2d 1105 (Bd. Pat. App. & Inter. 1993) (expanded Board) & MPEP 2131.03.

Alternatively, claim 2 is obvious because of the claimed range overlaps the range disclosed in Sugitani. Overlap of ranges is a prima facie case of obviousness. See In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976) & MPEP 2144.05.

***Claim Rejections - 35 USC § 103***

5. Claims 2, 3 and 6-9 is/are rejected under 35 U.S.C. 103(a) as being unpatentable over in view of Konoki et al., U.S. Patent No. 4,444,732.

Regarding claims 2 and 3, Konoki discloses a reactor tube for reforming hydrocarbons (part of a reformer) (abstract) having an alloy comprising 20-30% Cr, up to 10% Ni, up to 3% Si and up to 3% Nb (C4/L25-33). The example in Konoki disclosing a preferred example of alloy range overlaps the claimed range. Overlap of ranges is a prima facie case of obviousness. See In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976) & MPEP 2144.05.

Regarding claims 6-9, It would have been obvious to one of ordinary skill in the art at the time of the invention to compose the portion of the reformer with the high heat resistant alloy where steam and fuel come into contact as such area is subjected to high heat and corrosive conditions that would necessitate the use of the heat resistant alloy and prevent carburization (C1/L10 of Konoki).

6. Claims 4 and 5 is/are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugitani et al., U.S Patent No. 5,316,721.

Regarding claims 4 and 5, Sugitani discloses all of the limitations as set forth above in paragraph 3 and it would have been obvious to one of ordinary skill in the art at the time of the invention to compose the portion of the reformer with the high heat

Art Unit: 1764

resistant alloy where steam and fuel come into contact as such area is subjected to high heat and corrosive conditions that would necessitate the use of the heat resistant alloy and prevent carburization (Abstract of Sugitani).

**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vinit H. Patel whose telephone number is (571) 272-0856. The examiner can normally be reached on 9:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Vinit H. Patel  
April 4, 2005



Alexa Doroshenk  
Patent Examiner  
Art Unit 1764